

**The Paragraph Beginning on Line 23 of Page 1, which spans to Line 12 of Page 2 of the
Specification:**

The actual verification process, usually through a complementary NDT/E process, can be relatively difficult because the infrared defect image of the sample may bear little resemblance to the actual sample. For example, many subsurface defects appear only in the infrared image; to the naked eye, the sample containing the defects often appears perfectly uniform. As a result, a user must attempt to match the infrared image of the subsurface defect with the actual, unblemished sample surface to pinpoint the location of the defect. This is further complicated by the fact that the infrared camera lens often distorts the image, causing straight lines at the periphery of the lens's field of view to appear curved in the image. To locate and mark the positions of subsurface defects with some precision, prior art methods include using regularly spaced registration markers on the sample, calculating complex anamorphic mapping algorithms, or printing a full-size defect image and physically matching or overlaying the full-size image onto the actual sample. Because the sample may not have any distinguishing marks that appear in the defect image, precise registration of the image and the sample's surface can be difficult. In addition, these methods are time-consuming and are not particularly convenient, and at best they can only approximate the subsurface defect location due to the image distortion from the infrared camera lens. Further, measuring the depth of subsurface defects often requires some prior knowledge of the sample's dimensions or properties, such as the thickness of the sample, the depth of a known defect, the material's thermal diffusivity, etc. This information is often not available in practice, making precise depth measurements difficult with known techniques.

The First Full Paragraph under the heading “Detailed Description of the Preferred Embodiment:

Referring to Figure 1, one embodiment of the NDT/E method according to the present invention can be broken down into four steps. First, a defect image of the sample is obtained 100, digitized and displayed on a computer 102 using a computer program that has a referencing mechanism, such as drawing tool that allows the user to draw on the defect image using a mouse, touch screen, light pen, or other pointing device. The user can mark defects found in the defect image with the drawing tool 103. The defect image, including any marks made by the user, is then superimposed onto a live image 104, which is also displayed and maintained on the computer display device (the term “live image” as used throughout this description is an image displayed in real time on a computer display device, such as a CRT, such that any markings or movement made by an operator are captured in real time within the “live image” and are immediately displayed by the display device). The live image is preferably produced immediately thereafter and using the same lens and camera that produced the defect image to ensure a one-to-one correspondence between the live image and the defect image; using the same lens ensures that both images will have the same distortion. The user then marks the actual sample, using a marking pencil or similar device, while viewing the live image 106 rather than looking the sample itself. Instead of marking the part, the user may also use a point measuring device to measure characteristics of the sample, such as its thickness, and append the data to the image for annotation or calibration purposes. The defect image and live image can also be simply superimposed one atop the other for referencing purposes, without any user intervention.

IN THE CLAIMS:

Please rewrite claims 1-5, 7-9, 13, 17-18, and 21-23 as set forth below in clean form. Additionally, in accordance with 37 CFR 1.121 (c)(1)(ii), amended claims 1-5, 7-9, 13, 17-18, and 21-23 are set forth in a Marked Up Version in the pages attached to this amendment.